

Interprofessional education in health sciences: the University of Queensland Health Care Team Challenge

Rosalie A Boyce, Monica C Moran, Lisa M Nissen, Helen J Chenery and Peter M Brooks

Health professionals need to be able to work in teams, but, paradoxically, students receive little training in how to function within an interprofessional teamwork context. Competent patient care increasingly requires practitioners to know how each of the different professions contributes its skills and expertise to optimise health outcomes.^{1,2} Practitioners also need to respect the contribution of each profession to patient care.

International and domestic policy agencies are urging fundamental reform of the health workforce to place interprofessional competencies on an equal footing with profession-centred expertise.³⁻⁶ Employers are demanding that universities provide team-ready graduates who have been exposed to the principles of interprofessional education (IPE) and practice.⁷⁻⁹ Universities face significant logistical problems in aligning curriculum across multiple professions to provide the requisite IPE training opportunities. In this article we present an overview of the University of Queensland Health Care Team Challenge (UQ HCTC), which was designed to respond to the demands for workforce reform and to provide an authentic IPE teamwork experience.

Interprofessional education in university settings

University curricula are primarily devoted to producing graduates who are competent in their professional domain. Traditional approaches to curriculum organisation and clinical education severely limit the time and format that students from different professions can spend together, learning about and from each other. IPE is essential to break down the barriers between professions that undermine the quality of cross-profession communication and patient care. A recent Best Evidence Medical Education systematic review reported that IPE activities had a positive impact on learners' capacity to work together and on the quality of service provided to clients. Evidence of improved client satisfaction was also noted.¹⁰

The challenge is to embed opportunities for IPE and interprofessional practice within university structural frameworks that traditionally emphasise a profession-centred educational process. Not least among these challenges is developing IPE programs capable of competing with the student focus on profession-related education. Further, university staff expertise in IPE is limited, and resistance to non-profession-centred activities needs to be sensitively and imaginatively managed.⁸

Interprofessional education at the University of Queensland

UQ offers a range of interprofessional learning opportunities within its curriculum. In 2005, an IPE fellowship was established by the Faculty of Health Sciences. It sought innovative proposals capable of stimulating multilevel cultural change to accelerate acceptance of IPE philosophies and practices.^{1,11} The fellowship project, jointly awarded to two of us (RAB and MCM), proposed to implement an HCTC at UQ and explore the potential for a national competition.

ABSTRACT

- Successful transition of students to competent work-ready health professionals requires an ability to work in health care teams.
- Poor communication and teamwork practice has been implicated as a contributing source of error affecting patient safety.
- Traditional university curriculum structures severely limit the time that students from different professions can spend together, learning about and from each other (interprofessional education [IPE]).
- IPE initiatives need to focus on whole-of-system impacts and organisational sustainability.
- The Health Care Team Challenge (HCTC) is a high-profile leadership strategy that engages students, academic staff, practising professionals, policymakers and industry in a whole-of-system approach to IPE and interprofessional practice. Interprofessional student teams compete at a live public event for a cash prize for the best management plan centred on a complex clinical case study.
- National and international HCTCs are planned for future years.

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What is the Health Care Team Challenge?

The inaugural UQ HCTC event was held in 2007 (Box 1). It is a voluntary extracurricular learning activity for final-year students to demonstrate best practice in clinical care and interprofessional teamwork in an authentic patient-centred context.¹² It culminates in a lively annual public competition between interprofessional student teams. Each team is comprised of nine students, each representing one of the nine professions within the Faculty of Health Sciences. Students are recruited from a widely publicised call for participants and then randomly assigned to a team. The academic panel that supports the event collaborates with an external interprofessional team working in a health service to identify a patient (and carers) willing to be interviewed by the student teams and participate as a part of the judging panel. The academic panel devises the formal case study that has been structured to ensure that there is material relevant to all professions. The panel is also responsible for designing the extension questions, which are revealed for the first time at the competition event.

The UQ HCTC offers "real-life" practice in team-based problem solving, and competition between teams stimulates student motivation and engagement. The extracurricular design of the project helps to overcome some of the impediments faced by other pre-registration IPE projects.^{8,13-16} These barriers include:

- Incompatible alignment of teaching blocks;
- Student absence on clinical placements at different times;

1 The University of Queensland Health Care Team Challenge

The inaugural 2007 challenge involved three teams. Each team was made up of nine students (one each from the fields of audiology, dentistry, exercise science, medicine, nursing, occupational therapy, pharmacy, physiotherapy and speech pathology). About 200 people (students, academic staff, practising professionals, health service managers, state health department staff and family members) attended. Ten sponsors funded the event costs, after-event catering and prizes. The Queensland Minister for Health presented the prizes. Surveys and focus groups conducted after the event evaluated its impact on students and audience members. The 2008 event attracted an audience of close to 400, with representatives of six Australian universities attending as observers. The photograph shows the winning team in 2007 with the Queensland Minister for Health, the Hon. Stephen Robertson.



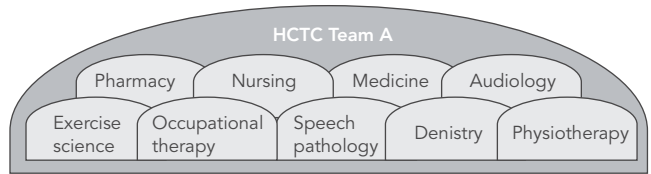
- Staff and student focus on professional identity; and
- Differing professional requirements for IPE competencies.

There is an intense 4-week preparation period for the teams before the public event. The crucial output of the pre-event phase is a management plan developed by each team based on a clinical case study scenario. Each case is developed by a team of clinicians from a range of professional backgrounds and based on a complex real-life scenario reflecting a chronic health problem. The case is layered to acknowledge the challenges faced by an individual and his or her family and community. Complications are embedded to challenge students to look beyond their own single-profession sphere of interest and to explore evidence-based and real-world standards of practice. To increase the authenticity of the learning experience, a genuine patient or “standardised patient” (a trained actor) is available for a team interview to assist in the development of the management plan (Box 2).

The teamwork skills developed in the pre-event phase are fundamental to success at the public event play-off, when each team is challenged with two rounds of previously unseen extension scenarios related to the case (Box 3). The judging panel is comprised of the patient and an external interprofessional team practising in the field relevant to the case study. The teams are assessed on multiple criteria: teamwork, collaboration, communication skills, prioritising professional input, understanding of different professional roles, and the degree to which the patient's needs are integrated into management planning.

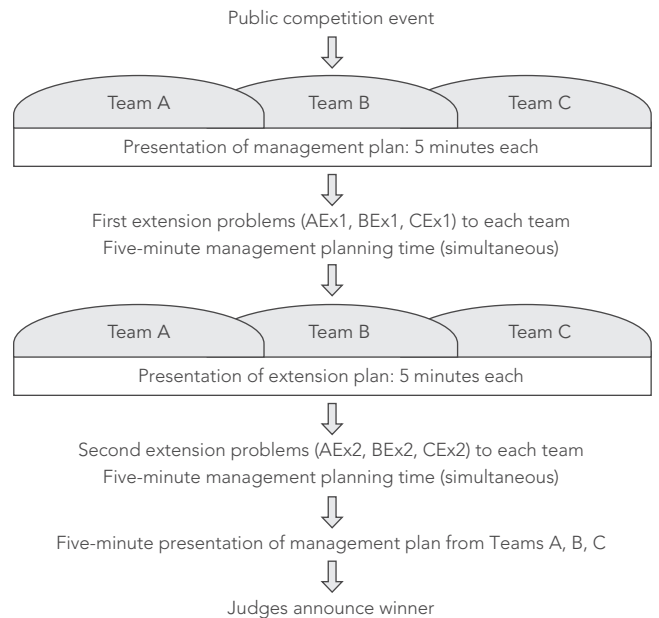
2 Health Care Team Challenge (HCTC) pre-event phase

- HCTC team of academic advisers representing each profession:
 - ⇒ Student recruitment — call for participants
 - ⇒ Compose the complex clinical case study
 - ⇒ Advise on event management issues
- Students (final-year) randomised to teams representing nine professions



- Four-week pre-event preparation on identical clinical case study
- A web-based platform with interactive communication capacity
- External experts act as mentors on specific topics (eg, teamwork)
- Trained actor as “standardised expert patient” or real patient for team interview

3 Health Care Team Challenge public competition event



What is unique about the University of Queensland Health Care Team Challenge?

The UQ HCTC model has several unique features designed to embed it as an IPE leadership vehicle and ensure its success. These include:

- Partnership with the University of British Columbia, the home of the only other HCTC in existence. Access to the University of British Columbia's HCTC event management know-how accelerated the concept-to-implementation phase at UQ;
- A clear focus on sustainability through external sponsorship;
- Establishment of a UQ HCTC alumni organisation to encourage student IPE leaders to carry their skills into the workplace;
- Research on changes in student knowledge and attitudes to IPE, longitudinal behavioural change after graduation, and impact on the audience viewing the live event;

- Authentic client involvement by recruiting a patient and carers to be interviewed by students and to be members of the judging panel; and
- Ministerial support for the HCTC from Queensland Health as partners in health workforce reform and IPE.

Organisational learning: getting started and growing stronger

The key challenges to implementing an HCTC at an institutional level are:

- Obtaining seed funds;
- Ensuring support from top management;
- Recruiting the support of all the professions;
- Inspiring final-year students to volunteer for an extracurricular event;
- Managing a large performance event; and
- Sustainability.

Experience conducting the 2007 and 2008 UQ HCTCs has demonstrated that these challenges have been comfortably overcome. Essential communication strategies for promoting expansion are an informative website (<http://www.HealthCareTeamChallenge.com>) and the ubiquitous YouTube video (for 2007 HCTC student participant reflections, see <http://www.youtube.com/v/tooDdfgwKik>; for footage of the 2008 event, see <http://au.youtube.com/watch?v=qdxMANtPlhw>).

Impact of the Health Care Team Challenge on student participants

The aims of the HCTC program were to:

- Increase student exposure to, immersion in and mastery of teamwork and interprofessional practice;
- Challenge students to critically appraise their professional role and the roles of other professions; and
- Develop a cohort of young IPE champions.

Two months after the HCTC event, eight focus groups were conducted with student participants. Forty-five students attended, with group sizes ranging from two to nine participants. They explored their perceptions of their own role and the role of other professionals in teamwork and patient safety and their commitment to interprofessional practice. Most of the students had returned to clinically based fieldwork and were able to reflect on how the experience had influenced their clinical practice. Transcripts of the focus group meetings are currently being analysed using a content analysis approach. The following are sample quotes:

The Challenge [HCTC] is a great event for anyone who is into high-quality care, very rapid decision making and who would like to open his eyes to the capabilities of fellow health workers. It has definitely changed the way I practise. (*Medical HCTC student*)

Right from the start of the competition, once I realised a medical practitioner was part of my team, I felt a bit anxious, as the thought arose "he is probably arrogant and will big-note himself every chance he gets and more than likely has that 'god-like' complex". I feel a bit guilty now, as he was wonderful right from the start. He had brought along some lovely snacks to eat while we worked ... and was extremely helpful and very organised. I must admit, I was very wrong. This I think was my

first big lesson! I dropped my guard and began to actively and fully engage the group. (*Allied health HCTC student*)

The interdisciplinary networking definitely allowed me to recognise that this approach is extremely useful in health care delivery. I am more aware of my own limitations and who I should refer to in certain situations. (*Exercise science HCTC student*)

Future developments

The next organisational challenge is to conduct a national HCTC (OzHCTC) and an international HCTC (Int-HCTC). The 2008 audience was surveyed about their attitudes to a national and international competition: 89/93 respondents (96%) were in favour of an Australian competition, and 86/92 (93%) supported the idea of an Australian team competing in an international challenge. The inaugural OzHCTC will be in Brisbane in August 2009 and the first Int-HCTC is planned for April 2010 in Sydney.

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Competing interests

None identified.

Author details

Rosalie A Boyce, BSc, MBus, PhD, Research Adviser (Hon)¹

Monica C Moran, MPhil(OT), GCertED, DSocSc, Lecturer²

Lisa M Nissen, BPharm, PhD, FSHP, Senior Lecturer¹

Helen J Chenery, BSpTher, MSpTher, PhD, Deputy Executive Dean (Academic)³

Peter M Brooks, MD, FRACP, Executive Dean³

¹ School of Pharmacy, The University of Queensland, Brisbane, QLD.

² School of Health and Rehabilitation Sciences, The University of Queensland, Brisbane, QLD.

³ Faculty of Health Sciences, The University of Queensland, Royal Brisbane and Women's Hospital, Brisbane, QLD.

Correspondence: r.boyce@uq.edu.au

References

- Greiner AC, Knebel E, editors. Health professions education: a bridge to quality. Washington, DC: National Academies Press, 2003.
- Harris MF, Zwar NA. Care of patients with chronic disease: the challenge for general practice. *Med J Aust* 2007; 187: 104-107.
- Canadian Health Services Research Foundation. Listening for direction II: national consultation on health services and policy issues for 2004-2007. Ottawa: CHSRF, 2004. http://www.chsrf.ca/other_documents/listening/pdf/LfD_II_Final_Report_e.pdf (accessed Jul 2008).
- Productivity Commission. Australia's health workforce. Productivity Commission research report. Canberra: Commonwealth of Australia, 2005. http://www.pc.gov.au/_data/assets/pdf_file/0003/9480/healthworkforce.pdf (accessed Mar 2009).
- World Health Organization. The world health report 2006: working together for health. Geneva: WHO, 2006. <http://www.who.int/whr/2006/en> (accessed May 2008).
- British Columbia Competency Framework for Interprofessional Collaboration. Leading interprofessional education and research. Vancouver:

- University of British Columbia College of Health Disciplines, 2008. <http://www.chd.ubc.ca/files/file/BC%20Competency%20Framework%20for%20IPC.pdf> (accessed Aug 2008).
- 7 Pruitt SD, Epping-Jordan JE. Preparing the 21st century global health-care workforce. *BMJ* 2005; 330: 637-639.
- 8 Stone N. Coming in from the interprofessional cold in Australia. *Aust Health Rev* 2007; 31: 332-340.
- 9 Lewis B, Stone N. Shaping a sustainable interprofessional education program. *Focus Health Prof Educ* 2007; 8 (3): 27-46.
- 10 Hammick M, Freeth D, Koppel I, et al. A best evidence systematic review of interprofessional education: BEME Guide No. 9. *Med Teach* 2007; 29: 735-757.
- 11 Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century. Washington, DC: National Academies Press, 2001.
- 12 Moran M, Boyce RA, O'Neill K, et al. The Health Care Team Challenge: extra-curricula engagement in inter-professional education (IPE). *Focus Health Prof Educ* 2007; 8 (3): 47-53.
- 13 Barr H. Unpacking interprofessional education. In: Leathard A, editor. *Interprofessional collaboration: from policy to practice in health and social care*. Hove, UK: Brunner-Routledge, 2003: 265-279.
- 14 Braithwaite J, Travaglia J. Inter-professional learning and clinical education: an overview of the literature. Canberra: Braithwaite and Associates and Australian Capital Territory Health Department, 2005. [http://www.med.unsw.edu.au/medweb.nsf/resources/Projects7/\\$file/IPL,+clinical+ed+Lit+review+AbsoluteFinal.pdf](http://www.med.unsw.edu.au/medweb.nsf/resources/Projects7/$file/IPL,+clinical+ed+Lit+review+AbsoluteFinal.pdf) (accessed Mar 2009).
- 15 Canadian Health Services Research Foundation. *Teamwork in healthcare: promoting effective teamwork in healthcare in Canada: policy synthesis and recommendations*. Ottawa: CHSRF, 2006. http://www.chsrf.ca/research_themes/pdf/teamwork-synthesis-report_e.pdf (accessed Aug 2008).
- 16 Kyrkjebø JM, Brattebø G, Smith-Strøm H. Improving patient safety by using interprofessional simulation training in health professional education. *J Interprof Care* 2006; 20: 507-516.

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